Royal College of Surgeons
ADVANCING SURGICAL CARE

Ann R Coll Surg Engl 2016; **98:** 187–191
doi 10.1308/rcsann.2016.0054

A review of the surgical conversion rate and independent management of spinal extended scope practitioners in a secondary care setting

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ABSTRACT

INTRODUCTION Spinal orthopaedic triage aims to reduce unnecessary referrals to surgical consultants, thereby reducing waiting times to be seen by a surgeon and to surgical intervention. This paper presents an evaluation of a spinal orthopaedic triage service in the third largest spinal unit in the UK.

METHODS A retrospective service evaluation spanning 2012 to 2014 was undertaken by members of the extended scope practitioner (ESP) team to evaluate the ESPs' ability to manage patient care independently and triage surgical referrals appropriately. Data collected included rates of independent management, referral rates for surgical consideration and conversion to surgery. Patient satisfaction rates were evaluated retrospectively from questionnaires given to 5% of discharged patients.

RESULTS A total of 2,651 patients were seen. The vast majority (92%) of all referrals seen by ESPs were managed independently. Only 8% required either a discussion with a surgeon to confirm management or for surgical review. Of the latter, 81% were considered to be suitable surgical referrals. A 99% satisfaction rate was reported by discharged patients.

CONCLUSIONS ESP services in a specialist spinal service are effective in managing spinal conditions conservatively and identifying surgical candidates appropriately. Further research is needed to confirm ESPs' diagnostic accuracy, patient outcomes and cost effectiveness.

KEYWORDS
Triage – Orthopaedic surgery – Physiotherapy

Accepted 31 May 2015

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Extended scope practitioner (ESP) physiotherapist roles are becoming instrumental in the delivery of healthcare services both in the UK and worldwide.[1] ESP services have grown in demand and need following the implementation of the 18-week wait targets. Alongside an increase in demand for spinal interventions by 56% over a five-year period, with concomitant closure of smaller hospitals, and retirement of many older surgeons, this has resulted in an increase in waiting times from referral to surgical completion.[2]

ESPs are used increasingly to assist with orthopaedic 'triage', in which the ESP makes clinical management decisions regarding patient care.[3] This has been shown to assist with improving surgical conversion rates,[4] reducing unnecessary referrals to surgeons[5] and providing a more holistic care package to patients.[6] A variety of studies have shown that less than 30% of all patients who typically see a surgeon are surgical candidates.[5,7,8] This evaluation adds to the current body of literature by reviewing the rate of independent management and surgical conversion in the NUH specialist spinal centre by spinal ESPs.

Methods

The NUH spinal service initiated an ESP triage because of increased demands on the service. Increased demands result in excessive waits to surgical intervention as well as increased surgical initiative clinics and chronic back pain clinics run by spinal surgical consultants (Boszczyk, 2015). The service began on a trial basis in 2009 with two ESPs, both of whom had experience in working together with consultants. Owing to its perceived success in managing low back pain patients, the ESP triage service grew to encompass two full-time roles alongside one part-time role.

Triage

At NUH, all referrals to the spinal disorders unit are paper-based and categorised by the lead ESP or spinal nurse practitioner on a daily basis. This 'paper triage' is designed to ensure that general practitioner (GP) referrals are appropriate for the consultant selected; to expedite referrals that require urgent review or further investigations

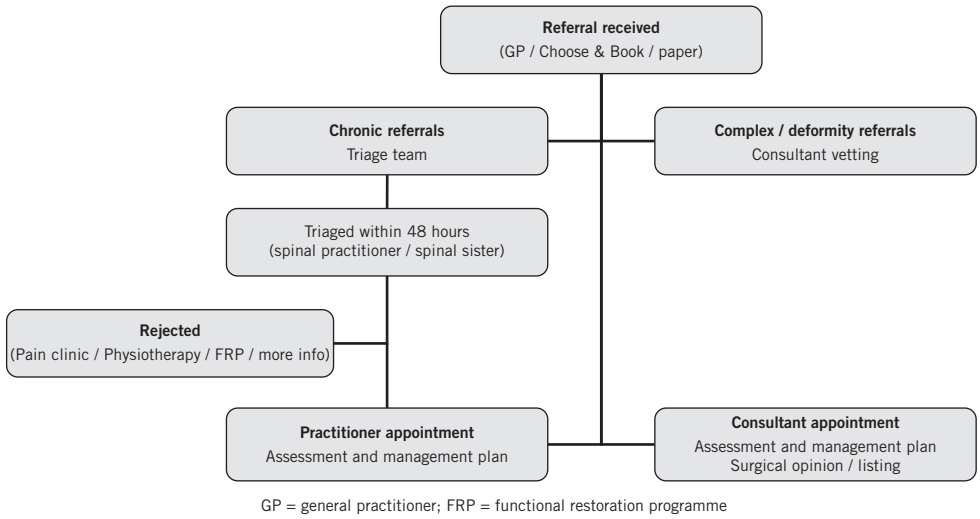

Figure 1 The process of paper triage

and to reduce waiting list time.[9] Figure 1 demonstrates the process of paper triage at NUH.

Any new chronic low back pain (with or without radicular signs and symptoms) is deemed appropriate for the ESP team. Since the beginning of 2014, neck pain, thoracic pain and radicular neck pain have also been deemed appropriate to be managed by the ESP team. Exclusions include scoliosis, complex patients (with extensive surgical or medical history), fractures, suspected metastatic disease and named referrals to certain consultants. Appointment letters are sent by post and include a booklet explaining the ESP service with an option for patients to change their appointment to see a spinal consultant if they wish. However, the waiting times were generally 2–3 weeks longer than for the ESP clinic.

Clinic arrangement

ESPs assessed patients in the spinal outpatients department. Each patient was allocated 30 minutes. Set times were arranged with different consultants on a monthly basis for discussion of complex patients or possible surgical candidates, where relevant imaging was discussed in light of the patient's presentation. Those patients identified as candidates for surgery were then listed directly, and following a letter and telephone call to confirm the surgical listing, patients were next reviewed at a preoperative clinic. ESPs were independently able to refer for diagnostic imaging, spinal injections and to other providers.

Study group

All patients seen by the ESPs over the two-year period from April 2012 to April 2014 were included in the study. Daily clinic sheets were inscribed manually with the outcomes of the patients during each clinic held and these were kept in a secure filing cabinet in the spinal unit. Data sheets for a six-month period were reviewed retrospectively and patient outcomes were recorded (including outcomes for those patients requiring surgical discussion). The NUH internal data system was used to analyse retrospectively whether identification of patients by ESPs as surgical candidates resulted in surgical conversion through reading of subsequent clinic letters.

Patient satisfaction data were collected after consultation, on discharge of random patients. This involved the ESP giving patients a form to complete in the waiting area that they could then hand to reception staff in order to reduce response bias. Patients remained anonymous throughout the audit. These data were collected and analysed for the purpose of a service evaluation and audit. According to the National Health Service (NHS) Health Research Authority this is not classified as research and does not therefore require ethical approval.[10]

Results

ESPs assessed a total of 2,651 patients over the 2-year study period (1,248 in 2012–2013 and 1,403 in 2013–2014). A total of 314 missed appointments occurred (11.8%). Patients were more likely to miss a new patient appointment than a follow-up appointment, with 186 new appointments missed (7.0%) and 128 follow-up appointments (4.8%). In 2012–2013, 7.4% (12/163) of non-attenders re-presented for a new patient appointment compared with 3.4% (5/145) in 2013–2014.

Consultant review

Consultant review was needed for patients deemed more complex or requiring a surgical opinion. Of 171 patients (6.5%) referred to or discussed with a spinal surgeon for surgical consideration, 138 (80.7% of referrals) were

deemed appropriate and were offered surgery. However, 27 (19.6%) of this subgroup did not actually undergo surgery because of either the risks of surgery or an improvement in their condition over time. The remaining 33 patients (19.3%) referred for surgical review were either discharged owing to not being surgical candidates (13.4%), referred to orthopaedic surgeons (2.9%) or neurologists (1.2%), or did not attend their consultation (1.8%).

Thirty-six of all patients (1.4%) seen by an ESP were discussed with spinal consultants to confirm management plans when the patients' care was deemed complex or the ESP sought confirmation for a non-surgical candidate. Table 1 shows the outcomes of surgical referrals. A further 36 patients were discussed for management decisions over the 2 years, resulting in a total of 207 patients requiring consultant input over the study period (7.8% of total seen).

Rate of independent management

ESPs independently managed 2,443 patients (92%) without any input from consultants. These patients were generally offered a combination of medication and activity advice with or without a referral to a conservative care treatment (including physiotherapy, osteopathy, a pain management programme or injection therapy). Of all new patients seen, 383 (25%) were discharged, either owing to their condition having resolved, a desire to avoid further intervention or not having a surgical diagnosis.

At a new patient consultation, a thorough assessment was undertaken and if deemed necessary, further investigations such as a spinal magnetic resonance imaging (MRI) would be arranged. Out of all 2,651 patients, 629 (24%) were sent for further investigations including x-rays or MRI. When considering just those being assessed for the first time, 33% were referred for further investigations, predominantly spinal MRI.

At the first consultation, many patients (18%) were referred for injection therapy, which included epidural injections, nerve root blocks or facet joint injections of the cervical or lumbar spine. These were used for both therapeutic purposes (pain relief) and to confirm a patient's pathology where imaging was inconclusive or negative.[11]

Table 1 Outcomes of surgical referrals

	n
Total referred for surgical opinion	171
Total confirmed as surgical candidate	138
Total proceeded with surgery	97
Declined owing to risk/improvement	27
Discharged	23
Orthopaedic referral	5
Neurological referral	2
Did not attend consultation	3

Over a third (38%) of patients were discharged, which often included a referral on for physiotherapy, osteopathy, the pain clinic or pain management services. Occasionally, patients presented with their symptoms resolved or almost completely resolved, in which case they were reassured and discharged with no intervention required. Medication advice was commonly given alongside basic physiotherapy advice to all groups.

Clinics

In the past five years since instigating the ESP clinics and allowing their growth, NUH has had significantly fewer spinal initiative clinics. The head consultant of the spinal team (BB) has noted that the number of outpatient clinics has reduced by three per month (equating to a saving of 12 hours of consultant time) and believes this is due to the ESP service.

Patient satisfaction

Data on patient satisfaction were collected from December 2012 to April 2014. A total of 139 questionnaires were returned (5.2%). Almost all of the feedback was positive and the responses are summarised in Table 2.

Discussion

Effective healthcare requires that patients are seen in a timely manner,[12] with the correct treatments offered at the right time,[5] and in a way that patients experience high satisfaction with staff knowledge and care received.[13] Paper triage and orthopaedic triage have both been instigated in the NHS as a means to improve patient function and symptoms, and to reduce waiting times by allowing the majority of non-surgical patients to be reviewed by a non-surgical specialist.[9]

ESPs have been shown anecdotally to be in diagnostic agreement with surgeons and have traditionally provided a more holistic approach of management for patients, irrespective of whether they are surgical candidates.[6,14] This results in the perception that ESPs are better placed to manage the vast majority of non-surgical cases in a spinal unit.[5,9]

Our study demonstrates a high surgical yield of patients discussed with surgeons for surgical consideration; 81% of patients referred for surgical consideration were confirmed to be suitable for surgery. This is in accordance with the findings of Burn and Beeson,[4] who demonstrated a surgical conversion rate of 75%, while Bath *et al* found a rate of 80%[5] and Napier *et al* 91%.[15] This confirms the ability of ESPs to appropriately select surgically suitable candidates. Conversely the surgical conversion rate of GPs has been estimated at 20–30%.[3,15,16] These figures support the use of ESPs in view of the growing number of patient referrals, a reduction in surgeon numbers and increased pressure to meet the 18-week targets.[2] In 2010 just over half of the providers and less than half of all commissioners were able to meet the 18-week targets put in place for orthopaedic services.[2]

Our study shows a higher proportion of independent management (92%) than for other services described in the literature (55–86%).[4,5,17–19] The NUH ESP service was

Table 2 Summary of responses to patient satisfaction questionnaire

	Number of responses	Outcome
Average waiting time to first appointment	119	6 weeks
Average wait to see ESP in clinic	108	9 minutes
Were you happy to see an ESP rather than a consultant surgeon?	138	99% yes
Did you feel treatment options had been fully explained?	139	100% yes
Do you feel you have a better understanding of your condition?	136	98% yes
Would you recommend this service to friends or relatives?	137	99% yes

ESP = extended scope practitioner

relatively well established when this service evaluation was performed, which may mean that the ESPs had a greater understanding of the surgical reasoning process and were able to identify suitable surgical candidates more accurately because of increased training and experience.[14]

Only 8% of all patients seen in the ESP service required input from a consultant. Coupled with the high surgical conversion rate, this suggests that this service enables a more efficient use of surgeons' time. Some surgeons support the ESPs by allowing occasional informal discussion either during their clinics or on an ad hoc basis.

Based on anecdotal evidence (Boszczyk, 2015), the average waiting time has reduced from almost 40 weeks for the spinal outpatients department to 2 weeks for a chronic back clinic. Rogers *et al* suggest that multiprofessional triage teams (consisting of GPs with special interests and physiotherapists) can result in longer waiting times for patients to see a surgeon.[20] This is an area in need of further research as ESPs in our study were able to directly list patients for surgery following discussion, eliminating the need for patients to have another outpatient consultation. Additional studies to confirm whether waiting times have in fact been reduced would be useful in evaluating the true efficiency of ESP services.

Patient satisfaction data suggest a high rate of satisfaction with the existing ESP service as 99% of all respondents would recommend this service to their friends and family. These results suggest higher satisfaction than previous triage reviews.[21] This may be because of selection bias, by the ESP choosing satisfied patients to provide feedback. Owing to the small sample size, there is also a high risk of reporter error.[22] However, to date, most studies have reported high satisfaction rates with ESP services as ESPs are more likely to spend more time with the patients, allowing them to feel listened to, and more likely to suggest more than one intervention, allowing a biopsychosocial approach to treatment.[6,14,21] Further evaluation of patient and provider satisfaction of the NUH ESP service will be invaluable in facilitating further growth and service improvements since providers are presently unable to select the ESP service.

The reduction in initiative clinics at NUH and the decrease in consultant-led chronic back clinics suggests that the ESP service is working effectively to task shift and triage appropriate patients. The National Spinal Workforce recognises the need for improved service provision for the majority of non-surgical low back pain cases seen in spinal departments.[2] Further evaluation is required to compare the diagnostic accuracy and clinical decision making process of spinal orthopaedic surgeons and ESPs.

As this was an unfunded study, time to analyse data sheets and patient demographics was limited. Longitudinal evaluation of the data may have been useful in assessing patient demographics alongside outcomes but owing to time constraints and the method in which the data were collected, this was unfeasible.

Conclusions

This study adds support to the use of spinal ESP services in a UK secondary care setting. As the presence of an ESP in secondary care triage becomes more commonplace, robust evidence is needed to support their role in the effective management of spinal conditions. The high rates of independent management and surgical conversion seen in this study imply that ESPs are able to independently manage and appropriately select surgically suitable candidates. This work suggests that ESPs may be performing an effective role in task shifting from spinal surgeons. However, more in-depth assessment is required to compare clinical reasoning skills and diagnostic accuracy as well as GP and patient satisfaction.

Acknowledgements

Many thanks to Health Education East Midlands, whose funding allowed the time to complete this paper for publication. Grateful thanks are also extended to Guy Wood and Paul Turner for their critique and contributions.

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